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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/728,430	11/30/2000	Mehryar Khalili Garakani	2705-130	6082

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James G. Stewart
MARGER JOHNSON & McCOLLOM, P.C.
1030 S.W. Morrison Street
Portland, OR 97205

EXAMINER

TSEGAYE, SABA

ART UNIT PAPER NUMBER

2662

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/728,430

Applicant(s)

GARAKANI ET AL.

Examiner

Saba Tsegaye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau. (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the amendment filed on 11/09/04. Claims 1-20 are pending. Currently no claims are in condition for allowance.

Claim Rejections - 35 USC § 102

2. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Shaffer et al. (US 6,324,409) hereafter Shaffer.

Referring to claims 1 and 14, Shaffer discloses a two-pass method for achieving maximal data compression for a voice frame modem relay channel (telephony over the Internet) within a voice frame network (IP network) between two endpoint modems (Fig. 5, col. 2, lines, 17-40, col. 7, lines 45-50, col. 8, lines 55-63), wherein each modem is operatively coupled with an associated gateway thereby defining an endpoint segment including an endpoint modem and its associated gateway (Fig. 5A, gateway X and Y), the method comprising: first negotiating maximal data compression parameters for either of the two endpoint segments of the modem relay channel, (col. 7, lines 1-30) wherein physical layers of the modems are terminated at the associated gateways and any voice compression is disabled (**uncompressed coding could be used instead of compressed coding in order to avoid distortion**) (col. 8, lines 33-54); communicating such maximal data compression parameters for at least one of the two endpoint segments to the other of the two endpoint segment (col. 7, Lines 15-30); and second negotiating maximal end-to-end data compression parameters between the associated gateways (X and Y)

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for the modem relay channel based upon the first negotiated maximal data compression parameters for the two endpoint segments (col. 7, lines. 20-45; col. 7, line 66-col. 8, line 16).

Referring to claims 2 and 15, Shaffer discloses the method of claims 1 and 14, which further comprise; transitioning the channel from a voice mode into a modem relay mode of operation (transition the signal from a standard telephony signal, into a digitized signal to be transmitted by a modem over a data network, col. 8, Lines 55-63).

Referring to claims 3 and 16, Shaffer discloses the method of parent claims 2 and 15, wherein said transitioning includes, terminating an end-to-end physical layer between the two modems (determine the capabilities of all intermediate devices between the sending and receiving device, col. 7, Lines 1-30) and third negotiating at either segment a local physical layer between the two modems and their associated gateways (setup the connection through the devices and their gateways based on the determined capabilities, col. 7, line 40-col. 8, line 3).

Referring to claim 4, Shaffer discloses the method of claim 3, wherein said third negotiating at one of the endpoint segments of a corresponding physical layer is delayed until said communicating is completed (setting up the connection occurs after the capabilities of all devices has been completed, col. 7, Lines 1-30).

Referring to claim 5, Shaffer discloses the method of claim 4, wherein said third negotiating is delayed by a refusal of the endpoint segment receiving the communicated maximal

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compression parameters to respond to commands from the endpoint segment performing said communicating (the system inherently tries to determine the capabilities of the receiving endpoint, however if the endpoint cannot be determined all of the way to the endpoint, this would induce a delay, and force the system to maximize the system to the receiver's approximate location, col. 7, lines 30-38).

Referring to claims 6 and 17, Shaffer discloses the method of parent claims 1 and 16 which further comprises inherently storing the end-to-end data compression parameters (signaling message) for the modem relay channel (entire connection) in a memory as an end-to-end negotiation coding scheme (posture, col. 7, Lines 20-30).

Referring to claims 7 and 18, Shaffer discloses a method of maximizing data compression between two modems in a voice frame network wherein each of the two modems is operatively coupled with an associated gateway defining a segment (Fig. 5, col. 7, lines 53-col. 8, lines 3, col. 8, lines 55-63), the method comprising: first negotiating at a first segment the maximum modem data compression to determine the maximum data compression capability of the first segment and communicating the determined capability from the first segment to a second segment (col. 7, lines 1-30); second negotiating at the second segment the maximum modem data compression to determine the maximum data compression capability of the second segment (col. 7, lines 1-30); determining the maximum end-to-end modem data compression capability of a modem relay channel between the two modems, wherein the modem relay channel further comprises a data pathway between the two modems such that modem tones are packetized and

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transmitted over the network as data (col. 8, lines 40-63); renegotiating at the first segment the determined maximum end-to-end modem data compression capability of the channel with respect to the first segment (col. 7, lines 39-45).

Referring to claims 8 and 19, Shaffer discloses the method of parent claims 7 and 18 which further comprises: terminating an end-to-end physical layer between the two modems (determine the capabilities between devices); and negotiating at either segment a local physical layer between the two modems and their associated gateways, thereby transitioning the channel into a modem relay mode of operation (set up a connection based on the capabilities, col. 7, lines 1-30).

Referring to claims 9 and 20, Shaffer discloses the method of parent claims 7 and 19 which, after said renegotiating, further comprises: inherently storing in a memory an end-to-end coding scheme (negotiation posture) from the signaling message of the two modems representative of the maximum end-to-end data compression capability of the channel (col. 7, lines 20-45).

Referring to claim 10, Shaffer discloses an apparatus for maximizing data compression between two endpoint modems in a voice frame network (IP network) defining a channel there between (channel for telephony over the Internet, Fig. 5, col. 8, lines 56-63), wherein each of the two modems is operatively coupled with an associated gateway (Fig. 5, gateways X and Y), with each modem and its associated gateway defining a segment, the apparatus comprising: a dual first-pass negotiation mechanism for independently determining the maximal data compression

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capability of each segment (col. 7, Lines 1-30); an end-to-end data compression capability determination mechanism for determining the maximal end-to-end data compression capability based at least in part upon the independently determined maximal data compression capability of each segment (col. 7, lines 1-30), and for disabling any voice compression (**uncompressed coding could be used instead of compressed coding in order to avoid distortion**) (col. 8, lines 33-54); and a second-pass negotiation mechanism for establishing the determined maximal end-to-end data compression capability for the channel (col. 7, Lines 20-45).

Referring to claim 11, Shaffer discloses the apparatus of claim 10 which further inherently comprises: an end-to-end coding scheme (negotiation posture) storage mechanism for storing in a memory the determined maximal end-to-end data compression capability for the channel based on the signaling message (col. 7, lines 20-30).

Referring to claim 12, Shaffer discloses the apparatus of claim 10, which further comprises: a modem relay connector for transitioning the channel to a modem relay mode of operation (transition the channel from a voice channel to a channel suitable for telephony over the Internet, col. 8, lines 55-63).

Referring to claim 13, Shaffer discloses the apparatus of claim 12, wherein said modem relay connector includes a local proxy negotiation mechanism (Gateway) for terminating an end-to-end physical layer (signaling message indicating the capabilities in the system) between the

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two modems and for negotiating at either segment a local physical layer between the two modems and their associated gateways (col. 7, line 53-col. 8, line 3).

Response to Arguments

3. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant argues (Remarks, page 7) that Shaffer does not address modem tones. Examiner respectfully disagrees with Applicant contention. Shaffer discloses two endpoint modems (Fig. 5, col. 2, lines 17-40; col. 7, lines 45-50, col. 8, lines. 55-63), wherein each modem is operatively coupled with an associated gateway thereby defining an endpoint segment including an endpoint modem and its associated gateway (Fig. 5A, gateway X and Y). Further, referring to col. 3, lines 59-62, Shaffer discloses that present invention may include any telecommunication signal coding, such as fax, and modem transmission.

Still on page 7, Applicant argues that Shaffer does not show, teach nor suggest that voice compression be disabled nor that the negotiation occur between gateways. Examiner respectfully disagrees with Applicant assertion. Referring to col. 8, lines 39-55, Shaffer discloses that **uncompressed coding could be used instead of compressed coding in order to avoid distortion**. Further, referring to col.7, line 66-col. 8, line 16, Shaffer discloses the negotiation occur between gateways.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
February 1, 2005


JOHN PEZZLO
PRIMARY EXAMINER